

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims

1-14. (Canceled)

15. (Currently Amended) ~~The An~~ image sensing apparatus ~~aeecording to claim 13,~~
comprising:

an image sensing element that outputs a charge signal in accordance with a light
amount of an object image formed on a light-receiving surface;

a light-shielding unit that shields said image sensing element from incident light;

a determination unit that determines a compensation amount for compensating a loss
in exposure amount for said image sensing element caused by delay in closing of said light-
shielding unit;

a setting unit that sets an exposure period of said image sensing element; and

a control unit that changes the set exposure period based on the compensation amount
determined by said determination unit if the exposure period is longer than a predetermined
period, and changes a gain to be applied to the charge signal based on the compensation amount
determined by said determination unit if the exposure period is equal to or shorter than the
predetermined period.

wherein, if the set exposure period is longer than the predetermined period and if the
compensation amount ~~calculated~~ determined by said ~~calculation~~ determination unit is greater

than a predetermined amount, said ~~calculation~~ determination unit ~~calculates~~ determines a second compensation amount for gain to be applied to the charge signal based on an excess of the compensation amount over the predetermined amount, and said control unit changes the exposure period based on the predetermined amount so as to compensate a part of the loss in exposure amount for said image sensing element and changes the gain based on the second compensation amount so as to compensate the rest of the loss in exposure amount for said image sensing element.

16. (Currently Amended) ~~The~~ An image sensing apparatus ~~according to claim 13,~~
comprising

an image sensing element that outputs a charge signal in accordance with a light amount of an object image formed on a light-receiving surface;

a light-shielding unit that shields said image sensing element from incident light;

a determination unit that determines a compensation amount for compensating a loss in exposure amount for said image sensing element caused by delay in closing of said light-shielding unit;

a setting unit that sets an exposure period of said image sensing element; and

a control unit that changes the set exposure period based on the compensation amount determined by said determination unit if the exposure period is longer than a predetermined period, and changes a gain to be applied to the charge signal based on the compensation amount determined by said determination unit if the exposure period is equal to or shorter than the predetermined period.

wherein, if the set exposure period is equal to or shorter than the predetermined period and if the compensation amount ~~calculated~~ determined by said ~~calculation~~ determination unit is greater than a predetermined amount, said ~~calculation~~ determination unit ~~calculates~~ determines a second compensation amount for exposure period based on an excess of the compensation amount over the predetermined amount, and said control unit changes the gain to be applied to the charge signal based on the predetermined amount so as to compensate a part of the loss in exposure amount for said image sensing element and changes the exposure period based on the second compensation amounts so as to compensate the rest of the loss in exposure amount for said image sensing element.

17. (Currently Amended) ~~The~~ An image sensing apparatus ~~according to claim 13 further~~ comprising

an image sensing element that outputs a charge signal in accordance with a light amount of an object image formed on a light-receiving surface;

a light-shielding unit that shields said image sensing element from incident light;

a determination unit that determines a compensation amount for compensating a loss in exposure amount for said image sensing element caused by delay in closing of said light-shielding unit;

a setting unit that sets an exposure period of said image sensing element;

a control unit that changes the set exposure period based on the compensation amount determined by said determination unit if the exposure period is longer than a predetermined period, and changes a gain to be applied to the charge signal based on the compensation amount

determined by said determination unit if the exposure period is equal to or shorter than the predetermined period; and

an image sensing mode setting unit that sets an image sensing mode,

wherein even if the image sensing mode set by said image sensing mode setting unit is an image sensing mode of controlling exposure by keeping an exposure period set by said setting unit, said control unit changes the set exposure period based on the compensation amount ~~ealeulated~~ determined by said ~~ealeulation~~ determination unit if the exposure period is longer than a predetermined period.

18. (Currently Amended) A control method for an image sensing apparatus having an image sensing element that outputs a charge signal in accordance with a light amount of an object image formed on a light-receiving surface and a light-shielding unit that shields said image sensing element from incident light, said method comprising:

~~ealeulating~~ determining a compensation amount for compensating a loss in exposure amount for said image sensing element caused by delay in closing of said light-shielding unit;

setting an exposure period of said image sensing element;

changing the set exposure period based on the ~~ealeulated~~ determined compensation amount if the exposure period is longer than a predetermined period, and changing a gain to be applied to the charge signal based on the ~~ealeulated~~ determined compensation amount if the exposure period is equal to or shorter than the predetermined period,

wherein, if the set exposure period is longer than the predetermined period and if the determined compensation amount is greater than a predetermined amount, a second

compensation amount for gain to be applied to the charge signal based on an excess of the compensation amount over the predetermined amount is determined, and in said changing step, the exposure period is changed based on the predetermined amount so as to compensate a part of the loss in exposure amount for said image sensing element and the gain is changed based on the second compensation amount so as to compensate the rest of the loss in exposure amount for said image sensing element.

19. (New) A control method for an image sensing apparatus having an image sensing element that outputs a charge signal in accordance with a light amount of an object image formed on a light-receiving surface and a light-shielding unit that shields said image sensing element from incident light, said method comprising:

determining a compensation amount for compensating a loss in exposure amount for said image sensing element caused by delay in closing of said light-shielding unit;

setting an exposure period of said image sensing element;

changing the set exposure period based on the determined compensation amount if the exposure period is longer than a predetermined period, and changing a gain to be applied to the charge signal based on the determined compensation amount if the exposure period is equal to or shorter than the predetermined period,

wherein, if the set exposure period is equal to or shorter than the predetermined period and if the determined compensation amount is greater than a predetermined amount, a second compensation amount for exposure period based on an excess of the compensation amount over the predetermined amount is determined, and in said changing step, the gain to be applied to

the charge signal is changed based on the predetermined amount so as to compensate a part of the loss in exposure amount for said image sensing element and the exposure period is changed based on the second compensation amounts so as to compensate the rest of the loss in exposure amount for said image sensing element.

20. (New) A control method for an image sensing apparatus having an image sensing element that outputs a charge signal in accordance with a light amount of an object image formed on a light-receiving surface and a light-shielding unit that shields said image sensing element from incident light, said method comprising:

- determining a compensation amount for compensating a loss in exposure amount for said image sensing element caused by delay in closing of said light-shielding unit;

- setting an exposure period of said image sensing element;

- changing the set exposure period based on the determined compensation amount if the exposure period is longer than a predetermined period, and changing a gain to be applied to the charge signal based on the determined compensation amount if the exposure period is equal to or shorter than the predetermined period; and

- setting an image sensing mode,

- wherein even if the set image sensing mode is an image sensing mode of controlling exposure by keeping a set exposure period, the set exposure period is changed based on the determined compensation amount if the exposure period is longer than a predetermined period.